

AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

LISTING OF THE CLAIMS

1. (Currently Amended) A computer readable medium including a lead-in area, a data area and a lead-out area, comprising:

physical mark information recorded as a pit type, the pit type selected from at least one of wobbled pits and straight pits in a specific area of the lead-in area not writable by end-user recorders,

wherein the physical mark information provides control information for controlling a reproduction of data recorded as straight pits on the data area and is formed along a modulated unique pattern, and wherein if the pit type is selected to be wobbled pits, at least a part of the wobbled pits forming the physical mark information is shifted away from a central line of the wobbled pits.

2-4. (Cancelled)

5. (Previously Presented) The computer readable medium according to claim 1, wherein the modulated unique pattern represents encryption information used in encrypting data of the data area.

6. (Previously Presented) The computer readable medium according to claim 5, wherein the control information further includes copy management information indicating whether duplication of the data is allowed.

7. (Previously Presented) The computer readable medium according to claim 6, wherein the physical mark information is recorded as at least one mark/space pair, wherein each mark/space pair includes a mark and a space each having an variable length.

8. (Previously Presented) The computer readable medium according to claim 1, further includes disc identification information identifying the type of the computer readable medium, wherein the disc identification information is located in an area preceding the lead-in area and the type of computer readable medium is one of read-only, recordable and rewritable.

9. (Cancelled)

10. (Previously Presented) The computer readable medium according to claim 8, wherein the physical mark information is recorded on a position of the recording medium detectable at an initial stage of a servo operation carried out in an optical disc apparatus, separately from a decoding operation to be carried out in the optical disc apparatus.

11. (Previously Presented) The computer readable medium according to claim 8, wherein the physical mark information is recorded in a permanent information and control data (PIC) area of the Blu-ray Disc Read-Only (BD-RO) disc where writing of data is impossible after manufacture of the computer readable medium.

12. (Cancelled)

13. (Currently Amended) A method of forming a recording medium, comprising:

forming an information area for recording disc management information and/or data; and

forming physical mark information as a pit type, the pit type selected from at least one of wobbled pits and straight pits in a specific area of a lead-in area of the recording medium, wherein the physical mark information provides control information for controlling a reproduction of data recorded as straight pits on a data area of the recording medium and is formed along a modulated unique pattern, wherein if the pit type selected is wobbled pits, at least a part of the wobbled pits forming the physical mark information is shifted away from a central line of the wobbled pits, and wherein the modulated unique pattern represents encryption information used in encrypting data of the data area.

14. (Cancelled)

15. (Previously Presented) The method of claim 13, further comprising:

recording disc identification information identifying a type of recording medium in an area preceding the lead-in area, wherein the type of the recording medium is one of read-only, recordable and rewritable.

16. (Cancelled)

17. (Previously Presented) The method of claim 15, wherein the forming step forms the physical mark information on a position of the recording medium being detectable at an initial stage of a servo operation carried out in an optical disc

apparatus, separately from a decoding operation to be carried out in the optical disc apparatus.

18. (Previously Presented) The method of claim 15, wherein the forming step forms the physical mark information as wobbled pits and straight pits including at least one mark/space pair in a permanent information and control data (PIC) area of the Blu-ray Disc Read-Only (BD-RO) disc where writing of data is impossible after manufacture of the recording medium, the physical mark information is a Blu-ray Disc Read-Only Memory (BD-ROM) identification area (ROMID), and the recording medium is a read-only recording medium.

19. (Previously Presented) The method of claim 15, further comprising:
recording copy management information indicating whether duplication of the data is allowed on the recording medium.

20. (Currently Amended) A method of reproducing data from a recording medium, including a lead-in area, a data area and a lead-out area, comprising:

detecting physical mark information recorded as a pit type, the pit type having been selected from at least one of wobbled pits and straight pits in a specific area of the lead-in area not writable by end user recorders, the physical mark information being formed along a modulated unique pattern, wherein if the pit type selected was wobbled pits, at least a part of the wobbled pits forming the physical mark information is shifted away from a central line of the wobbled pits; and

controlling a reproduction of data recorded as straight pits from the data area based on the detected physical mark information.

21. (Cancelled)

22. (Previously Presented) The method of claim 20, further comprising:
reading disc identification information identifying a type of recording medium from an area preceding the lead-in area, wherein the type of recording medium is one of read-only, recordable and rewritable.

23. (Previously Presented) The method of claim 22, wherein the detecting step detects the physical mark information recorded in a permanent information and control data (PIC) area of the Blu-ray Disc Read-Only (BD-RO) disc where writing of data is impossible after manufacture of the recording medium.

24. (Previously Presented) The method of claim 23, wherein the controlling step controls the reproduction by utilizing the detected physical mark information formed along the modulated unique pattern which represents encryption information used in encrypting data of the data area.

25-40. (Cancelled)

41. (Previously Presented) The method of claim 24, wherein the controlling step further controls a reproduction of a recording medium by utilizing copy management information recorded on the recording medium indicating whether duplication of data is allowed in such a manner that the reproduction is performed if the duplication is allowed.

42. (Currently Amended) An apparatus for reproducing data from a recording medium including a lead-in area, a data area and a lead-out area, comprising:

an optical pickup configured to detect physical mark information recorded as a pit type, the pit type selected from at least one of wobbled pits and straight pits in a specific area of the lead-in area not writable by end user recorders, the physical mark information being formed along a modulated unique pattern, wherein if the pit type selected is wobbled pits, at least a part of the wobbled pits forming the physical mark information is shifted away from a central line of the wobbled pits; and

a controller configured to control a reproduction of data recorded as straight pits from the data area based on the detected physical mark information.

43. (Previously Presented) The apparatus of claim 42, wherein the optical pickup is configured to read disc identification information identifying a type of medium from an area preceding the lead-in area, wherein the type of the recording medium is one of read-only, recordable and rewritable.

44. (Previously Presented) The apparatus of claim 43, wherein the optical pickup is configured to detect the physical mark information recorded in a permanent information & control data (PIC) area of the Blu-ray Disc Read-Only (BD-RO) disc where writing of data is impossible after manufacture of the recording medium

45. (Previously Presented) The apparatus of claim 44, wherein the controller is configured to control the reproduction by utilizing the detected physical mark information formed along the modulated unique pattern which represents encryption information used in encrypting data of the data area.

46. (Previously Presented) The apparatus of claim 45, wherein the controller is configured to control the optical pickup to reproduce data based on copy management information recorded on a medium, the copy management information indicating whether duplication of data is allowed.

47. (Previously Presented) The computer readable medium of claim 8, wherein the disc identification information is further included in a sub area of the lead-in area.

48. (Previously Presented) The computer readable medium of claim 47, wherein the sub area of the lead-in area is permanent information and control data (PIC) area of the Blu-ray Disc Read-Only (BD-RO) disc where writing of data is impossible after manufacture of the computer readable medium.

49. (New) A method of forming a recording medium, comprising:
forming an information area for recording disc management information and/or data; and
forming physical mark information as a pit type, the pit type selected from at least one of wobbled pits and straight pits in a specific area of a lead-in area of the recording medium, wherein the physical mark information provides control information for controlling a reproduction of data recorded as straight pits on a data area of the recording medium and is formed along a modulated unique pattern, wherein if the pit type selected is wobbled pits, at least a part of the wobbled pits forming the physical mark information wobble in a non-overlapping manner with respect to a central line of the wobbled pits, and wherein the modulated unique pattern represents encryption information used in encrypting data of the data area.

50. (New) The method of claim 49, wherein the pit type selected from at least one of wobbled pits and straight pits in a specific area of a lead-in area of the recording medium is based on a type of the recording medium, and the type of recording medium is one of Read-Only, Recordable, and Rewritable types.

51. (New) The method of claim 13, wherein the pit type selected from at least one of wobbled pits and straight pits in a specific area of a lead-in area of the recording medium is based on a type of the recording medium, and the type of recording medium is one of Read-Only, Recordable, and Rewritable types.

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